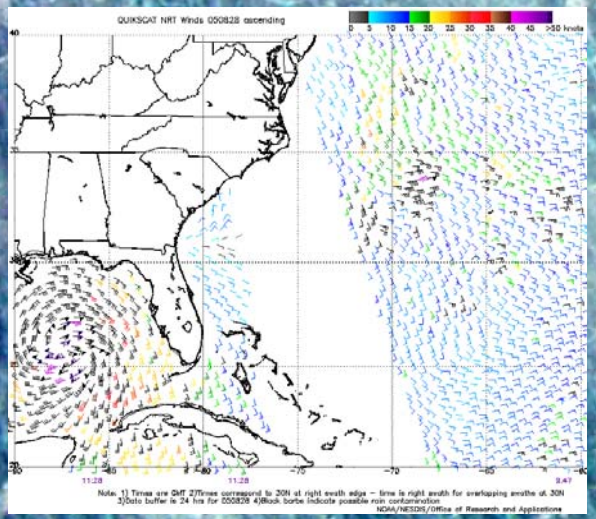
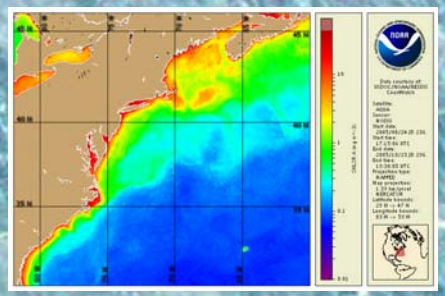
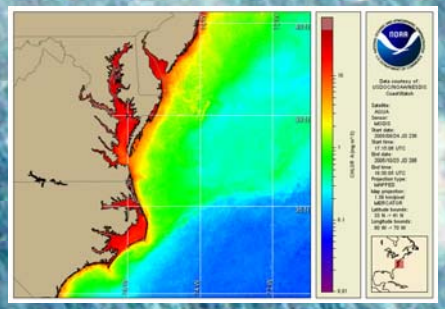
Oceanography and Meteorology at NOAA

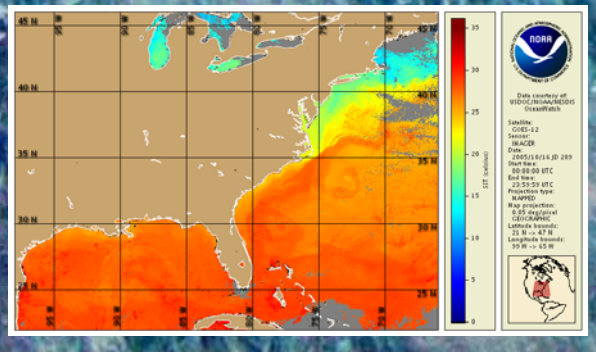
The National Oceanographic and Atmospheric Adminstration

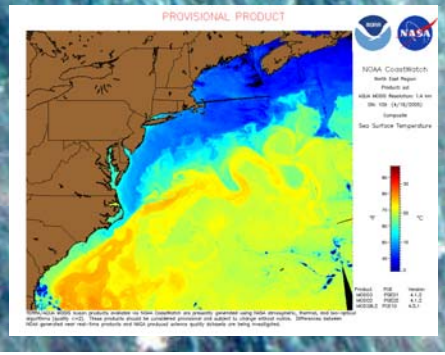
SATELLITES PROVIDE INSTANTANEOUS COVERAGE OF LARGE REGIONS OF THE EARTH SURFACE, SENDING DATA BACK TO GROUND-STATIONS. THIS SATELLITE DATA IS THEN CONVERTED BY SCIENTIFIC ALGORITHMS INTO SUCH ENVIRONMENTAL PARAMETERS AS WIND SPEED AND DIRECTION (UPPER LEFT), CHLOROPHYLL (TOP 2 RIGHT), AND SEA SURFACE TEMPERATURE (BOTTOM ROW). MOST OF THIS DATA IS AVAILABLE TO ANY SCIENTIST, STUDENT OR CITIZEN THAT WISHES TO DOWNLOAD OR VIEW THE DATA. METEOROLOGISTS USE SUCH DATA TO FORECAST THE PATH AND INTENSITY OF HURRICANES. OCEANOGRAPHERS USE IT TO FURTHER UNDERSTAND OCEAN DYNAMICS AND PROCESSES, SUCH AS THE GULF STREAM.











FIELD EXPERIMENTS ALLOW SCIENTISTS TO INVESTIGATE THE OCEANS AND ATMOSPHERE IN A MORE "UP CLOSE" MANNER. THIS MAY BE DONE USING AIRCRAFT AND SHIPS, WHICH MAY GATHER DATA WHILE UNDERWAY AS WELL AS DEPLOYING *in-situ* INSTRUMENTATION SUCH AS BUOYS OR DROPSONDES. OCEANOGRAPHERS AND METEOROLOGISTS USE THIS DATA: 1) TO GAIN A FURTHER UNDERSTANDING OF THE EARTH'S OCEANS AND ATMOSPHERE; 2) TO DEVELOP BETTER SCIENTIFIC MODELS; 3) TO VALIDATE THE ALGORITHMS THAT UTILIZE SATELLITE DATA. OCEANOGRAPHERS MAY ALSO PERFORM AT-SEA EXPERIMENTS TO DETERMINE THE HEALTH AND ABUNDANCE OF VARIOUS FISH POPULATIONS.

INSIDE THE EYE OF HURRICANE KATRINA

INSIDE THE EYE OF HURRICANE RITA

GULF OF ALASKA WINTER EXPERIMENT